



Tenant Design Criteria

Section t Technical Criteria

Updated: April 2017



ADDENDUM LOG

July 2009

Full Update

September, 2011

Waterproof membrane requirement updated

March, 2014

Distribution of utilities through exit corridors is prohibited with exception (t17)

October, 2014

Added Solar Panel language (t7)

October, 2014

At grade level electrical conduit is not allowed to be installed in the slab (t5)

December, 2014

Wiring language updated (t6, #9)

January, 2015

Language regarding the waterproofing membrane on page t15 revised. (t15)

March, 2015

Updated Plumbing content to list specific location for main water shut off valve to be at eye level. (t15)

June, 2015

*Updated Air Handling Units (AHUs) language (t9)
Updated Energy Management System language (t10, t11)*

March, 2016

Added Electric / Water Sub-meter Requirements (t4)

April, 2016

Added Water Efficiency language (t16)

April, 2017

Removed language regarding Telephone Service (t6)

Replaced with language regarding Communications Services (t6)

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ELECTRIC / WATER SUB-METER REQUIREMENTS

As applicable for property, if there is an existing electric or water sub-meter in the Tenant's space, then the Tenant must have the meter recommissioned to ensure proper installation and functionality. Alternatively, the Tenant can choose to install a new meter that meets Macerich's meter specifications. Either option must be performed by a Landlord-approved electrician and verified by Macerich, and will be at the Tenant's sole cost.

METER SPECS

Tenant may install the meter specified by Macerich or the like. Meter must meet the following criteria:

Electric:

- Meters must be revenue grade.
- There must be at least a 6-digit display.
- Meter must be able to read demand (kW) and usage (kWh).
- The meter must capture the electric usage of the entire Tenant space, including HVAC units. If this is not possible, then it must be noted.
- If using a meter with CTs, note if a multiplier is required and what the multiplier is on the face of the meter.

Water:

- Meter must be properly sized for the water flow in the space. Generally this means the size of the meter should match the size of the water line, or the meter can be 1/4" smaller than the line. This means that if there is a 1" water line servicing the space, a properly sized meter would be 3/4" or 1".

Installation Requirements:

- Meters must be installed by a Landlord approved electrician.
- Installation must be verified and approved by the Operations Manager, or a member of the Operations staff, at the property.
- Proof of inspection must be sent to the Energy Management Department (Alaine Marx, alaine.marx@macerich.com) and should include the following:
 - Date of installation or recommissioning
 - Picture of the meter at time of installation or recommissioning. Picture should be clear and should display kWh and kW legibly.
 - Confirmation that the meter covers whole tenant space.
 - Meter make and model
 - Units that the meter reads in
 - Multiplier, if applicable

ELECTRICAL CRITERIA

General Design/Construction Coordination

The electrical criteria is provided for the purpose of designing the Tenant's electrical system. This criteria is provided as a guideline for Tenant's Engineer. It is the Tenant's responsibility to verify existing conditions and comply with all applicable codes and standards.

1. Conduit and raceway hangers, clamps, light fixtures, junction boxes, supports, etc. must be fastened to joists and/or beams. Do not attach directly to the slab, roof deck, ductwork, piping or conduit above.
2. Tenant's equipment in the Mall electric room must be clearly identified with Tenant's name and space number.
3. Provide access panels at all junction box locations and at smoke detectors above the ceiling.
4. All outlet boxes, floor boxes, wire raceways, power/telephone poles, plug-in molding, wiring devices, hanger supports and other items required for a complete distribution must be furnished and installed by Tenant.
5. Furnish and install power to roof top units, water heater, store fixtures, signage, music systems and any other fixtures or equipment provided by Tenant. All cutting and patching must be provided by Tenant.

Complete Engineered drawings must be submitted to the Landlord's Tenant Coordinator for review and approval. Landlord will review the plans for conformance to basic Mall requirements. The Landlord does not review for electrical design, nor does the Landlord accept responsibility for the Tenant's adherence to governing codes.

The documents to be submitted for Landlord approval must include the following:

1. Complete plans and specifications for all electrical work, including lighting, power and one line riser Diagram. Documents must be signed and sealed by a Licensed Engineer in the state where the Shopping Center is located.
2. Drawings must include panel schedules, load calculations and meter information.

3. Structural drawings must be submitted for all equipment that will be suspended from the steel structure.

Power Source

All work required to connect Tenant to the main power source must be performed by Landlord's designated electrician, at Tenant's expense. Exceptions to this requirement may be granted by the Tenant Coordinator.

Tenant is responsible for feeders to the Tenant space, installation of a dry type transformer, panels and complete distribution throughout the Tenant space. A General Electric demand check meter must be installed in the Mall electric room.

Landlord will provide the main power source for Tenant's connection. Power source is 277/480v, 3 phase, 4 wire and is available in the nearest Mall electric room. Tenants are responsible for installation of the fused buss duct disconnect switch and must pull the feeder wires to the Tenant's demised premises. Landlord will provide an empty 2" conduit with pull-wire from the mall electric room to the Tenant space. If a larger conduit is required, Tenant is responsible for installation of same from the power source to the demised premises.

Demand Check Meter

All Tenants are required to install a **GE Model #784X400001** (for up to 200 amp service) Fifteen-minute demand check meter in the Mall electric room. Adhere to the following demand meter criteria:

1. Load survey should be made of entire space to include lighting, HVAC, and miscellaneous electrical equipment.
2. The meter should be sized for mid range reading at design load.
3. Meters over 200 amps will require solid core current transformers and a current transformer meter. The current transformer ratio shall be selected such that current transformer's secondary current is not less than .125 amps when the space is under minimum load conditions.
4. Always use a current transformer meter with current transformers.



ELECTRICAL CRITERIA (Cont'd.)

5. Be sure that current transformer is installed on all three (3) legs of service being metered.
6. Take amp readings on each leg to verify accuracy of meter during normal operating hours.
7. The meter should be tested by an independent testing agency and a certificate should be furnished to the Mall Owner.
8. An electrical contractor experienced in selection and installation of check meters must install meters.
9. Tenant must furnish the Landlord with Underwriters Certificate upon completion of work.
10. Electric consumption and demand readings will be taken monthly on a date corresponding to utility company read dates. These readings will be used to adjust Tenant's energy profile for computing year end adjustments.
11. Datapult systems must be submitted to the Landlord prior to installation and Landlord will require access to all consumption and demand information on a daily and/or monthly basis.
12. DISTRIBUTORS:

Electrical Wholesalers
 39 Newton Road
 Danbury, CT 06810
 P: (203) 743-5578

Communications Services

1. Landlord has installed a high-speed fiber infrastructure at the Center for purposes of providing voice and data access throughout the Center. All access for Tenant's voice and data services must be sourced through Landlord's designated provider which is currently Granite Telecommunications or such alternative provider as designated by Landlord. The vendor contact for voice and data services can be found in the Tenant Criteria Package under General Information.
2. For all wiring needs in common electrical rooms, a required vendor must be used to maintain the integrity of the electrical room. The vendor contact for low voltage wiring needs can be found in the Tenant Criteria Package under General Information.

Lighting

Provide a lighting schedule for review in conjunction with a reflected ceiling plan. Lighting must conform to the following guidelines:

1. Display window lighting must be controlled by a time clock and be on during the hours the Shopping Center is open. Display window lighting at the ceiling must be glare-free and at approved levels at the storefront glass line.
2. Recessed incandescent down lights may be used.
3. Exit, emergency and night lights must be provided throughout, as determined by governing codes.
4. Fluorescent lighting in the sales area must be recessed and must use metal parabolic louver type lenses with a minimum of 18 cell configuration for a standard 2' x 4' fixture. Bare lamp fluorescent or fluorescent fixtures with acrylic prismatic lenses may be used only in concealed areas or stock rooms.
5. Track lighting may be used if the track is painted to match the ceiling color.

Tenant is responsible for lighting system control, including connection to the Building Management system and connection to the Fire Alarm system. All emergency lighting, exit signs, horns and strobes must be provided by Tenant as required by code.



ELECTRICAL CRITERIA (Cont'd.)

Material/Equipment Specifications

1. Drawings must include complete material specifications including manufacturer's name and product number and complete schedules of all equipment and fixtures to be installed.
2. All material and equipment must be new and of a commercial grade and must bear Underwriter's labels where such labeling applies.
3. At grade level electrical conduit may be installed at least 4" under the slab and must be in Schedule 40 PVC conduit. But never allowed to be installed in the slab or less than 4" below slab.
4. Floor boxes must be watertight.
5. Pull boxes or junction boxes must be a minimum of 12 gauge galvanized steel outlets. Boxes in walls must be galvanized pressed steel or case metal. Caulk around boxes to eliminate noise transmission.
6. All main and branch feeders and circuitry wiring must be copper. All conductors to have 600 volt insulation type THW, THWN or THHN.
7. Convenience receptacles must be specification grade, 120 volt, 20 amps and be grounding type per NEC.
8. Manual or magnetic starters, switches, contactors, relays, time switches, safety devices, dimmers and other controls must be commercial type with heavy duty ratings and must be installed in strict conformance with the manufacturer's recommendation and applicable codes.
9. Any exposed low voltage wiring must be plenum graded.
10. All wiring of any type must be installed in conduit or must be armored cable (BX). Armored cable will only be allowed for concealed branch circuit wiring within the demised premises. Exposed and/or open wiring of any kind will not be allowed. Flexible conduits must be used for connections to vibrating equipment.

Fire Alarm System - Life Safety

1. Tenant must provide a complete fire alarm detection system within the Tenant space as an extension of the Landlord's building-wide addressable fire alarm system.
2. Tenant is required to use Landlord's designated contractor for installation of the necessary smoke detectors and connection to the main fire alarm system. System must comply with the requirements of the governing authority.
3. All emergency lighting, exit signs, horns and strobes must be provided by Tenant as required by code.



MECHANICAL CRITERIA

The mechanical criteria is provided for the purpose of designing the Tenant's heating, ventilating and air conditioning system. This criteria is provided for Tenant's Engineer. It is the Tenant's responsibility to verify existing conditions and comply with all applicable codes and standards.

Tenant must connect to the Mall's central Chilled Water (CW) and Energy Management System (EMS). The Tenant's system(s) must be designed and installed in accordance with the design criteria included herein and all applicable codes. All existing AHUs less than Ten (10) years of age being reused must be serviced and repaired as necessary to meet original manufacturer specifications, inclusive of a complete coil cleaning. Proof of servicing must be provided to Mall Management prior to the store opening for business. All existing AHUs installed more than Ten (10) years prior must be replaced during construction.

Complete Engineered drawings must be submitted to Landlord's Tenant Coordinator for review and approval. Landlord will review the plans for conformance to basic Mall requirements. The Landlord does not review for mechanical design, nor does the Landlord accept responsibility for the Tenant's adherence to governing codes.

Equipment or other obstacles placed in the vicinity of existing solar panels shall follow the guidelines outlined below:

- No equipment shall be placed within 10 feet of any solar inverter or AC junction box
- To avoid interfering with solar panel production, objects shall be placed no closer than the distance defined as 2 times their height. For example, if a 4 foot HVAC unit is installed, it must be located at least 8 feet away from a solar panel.
- In no cases, regardless of the height shall an obstacle be placed within 3 feet of solar equipment
- No conduits, pipes or other devices shall be added to existing conduit carrying devices
- No wires, pipes or other devices will be routed across or over existing solar equipment
- All modifications within 20' of solar equipment shall require review and approval from Macerich personnel

The documents to be submitted for Landlord approval must include the following:

1. Complete plans and specifications covering the heating, ventilating and air conditioning system work. Show make, type and performance of all equipment. Documents must be signed and sealed by a Licensed Engineer in the state where the shopping Center is located. It shall be the Tenant's responsibility to determine the required locations of fire dampers on its plans and specifications. Provisions will be made for access to all fire dampers.
2. Calculations showing the heating and cooling required, including transmission and ventilation losses in the space and heat and cooling provided for the ventilation supply and exhaust required for the space. Calculations shall be as described in "Load Calculations" included below.
3. Calculations showing the chilled water pressure drop through the Tenant's system.
4. Temperature control system data showing make, control and energy management systems.
5. Exhaust system layout, including cfm and equipment specifications.
6. Chilled Water Piping diagram.
7. Structural details for support of all rooftop equipment and equipment suspended from the steel structure.

Load Calculations

The Tenant must perform all calculations in accordance with methods set forth in the latest American Society of Heating, Refrigeration and Air Conditioning Engineers' Guide and Data Book and in accordance with good engineering practice. All calculations must be tabulated in a concise, orderly manner.

Heating load calculation: All spaces must be calculated to maintain the minimum space temperatures in sales and public spaces of 68°F and 50°F in non-public spaces.



MECHANICAL CRITERIA (cont'd.)

Cooling load calculation: All spaces must be calculated to maintain the minimum space temperature of 73°F and a maximum relative humidity of 55°F and shall take into account all interior heat producing items such as people, equipment, roof and exterior walls.

The Tenant is required to submit calculations indicating the heating and cooling loads for the space and calculations for exhaust and make-up air.

Tenants must design for a maximum noise criteria of NC40 for all spaces except kitchens and other similar work areas.

Exhaust Requirements

Tenants whose operation produces objectionable odors such as restaurants, pet shops, hair salons, nail salons and the like must maintain 10% negative air pressure with respect to the Mall by providing make-up air equal to 90% exhaust air volume. Tenant may be required to provide, at Landlord's discretion, a separate make-up outside air supply system to balance Tenant's exhaust system. Spaces that require exhaust must be designed to provide negative air pressure relative to adjoining conditioned spaces to prevent odor transfer.

Tenants whose operation generates grease, must install an exhaust fan with a Landlord approved Grease Guard system on the roof.

Roof mounted exhaust fans must be ducted to ceiling grilles located approximately in the center and rear of the demised premises and specifically near the area where the odors are generated. The system shall be designed to cause the exhaust air to gravitate from the Mall common area to the odor producing area and then exhausted out.

Air filtration systems and bathroom exhaust fans are not acceptable solutions.

The exhaust fan must be interlocked with the light switches for the store customer service area.

The combined HVAC and exhaust system must be in operation during all hours that the Tenant is open for business.

Kitchen Exhaust Systems

Kitchen exhaust systems are subject to Landlord's review to ensure the exhaust does not compromise the ventilation air of adjacent Mall roof top units. Kitchen exhaust systems are subject to the following criteria:

1. The exhaust fan must be a SWSI centrifugal fan which must be fitted with a minimum 10'-0" stainless steel upblast. Guy wires must be attached to the roof in order to secure the stack. Use the Mall roofer for connection of the guy wires. No other type of exhaust fan is allowed. Detail on page t12.
2. A "Grease Guard" grease containment system (or approved equal) must be installed to protect the Landlord's roof. A quarterly maintenance program must be in-place for the grease containment units. Proof of the maintenance contract must be presented to Landlord prior to the store opening.

Roof Penetrations

If use of roof top units, roof-type supplemental supply, condensing units or exhaust air units by the Tenant is permitted by the Landlord, units must be located on that part of the roof of the building directly above the demised premises as designated by Landlord. Tenant must provide and install all necessary piping and other necessary appurtenances for the operation of the roof top equipment. To the extent any of Tenant's equipment is to be located on the roof, the Tenant agrees to erect roof units in accordance with the requirements of the Landlord and the Tenant further agrees to repair any and all damage to the roof and structure caused by hoisting installation and the maintenance and/or servicing of such equipment, all of which must be at the sole cost and expense of the Tenant.

The Tenant must furnish and install all curbs, supports, lintels, pipes, ducts, vent caps, air inlets, exhaust hoods, louvers, flashings, counterflashing, etc. as required for any equipment requiring openings through the roof and/or exterior walls. The use of curb adapters is not allowed.

The Landlord has the right to inspect the quality of the work and approve locations and, if found unsatisfactory, reject same.



MECHANICAL CRITERIA (cont'd.)

All cutting, patching and restoring of roofing is to be done by the Landlord's roofing contractor at the Tenant's expense. All repairs, maintenance and damage to the roof and/or building due to Tenant's installation must be at the Tenant's cost and expense.

Ductwork

Ductwork must be galvanized sheet metal type constructed in accordance with SMACNA requirements for low-pressure ductwork. Duct must be lined or wrapped at the Tenant's discretion. Duct velocities must not exceed 1600 fpm. A maximum of 5'-0" of flexible round duct may be used for run-outs to individual outlets. No other flex duct will be allowed. Round duct will be externally wrapped with 1" thick 1½ # density insulation. The Tenant will furnish ductwork from discharge of the air handling unit to ceiling or sidewall supply grilles or diffusers. Grilles or diffusers shall be furnished and installed by the Tenant.

1. The Tenant must furnish and install in the supply air ductwork an electrical black wire resistance heating coil complete with safety controls and interlocks as required by local and national codes. Heating coil shall be manufactured by Chromolox, Brash, or equal, as approved by the Landlord.
2. Each system must have duct smoke detectors as required by codes.

Ventilation Air

Outside air will be supplied to the Tenant space at a rate of 0.1 cfm/square foot.

Air Handling Units (AHUs)

Each Tenant must supply an air handling unit(s) as required, complete with a chilled water-cooling coil. All existing AHUs less than Ten (10) years of age being reused must be serviced and repaired as necessary to meet original manufacturer specifications, inclusive of a complete coil cleaning. Proof of servicing must be provided to Mall Management prior to the store opening

for business. All existing AHUs installed more than Ten (10) years prior must be replaced during construction. The Tenant's design drawings will include all pertinent design data. The AHU must include, as a minimum, the following features:

1. All new fan coil units must be either Carrier 39L or Trane (LPC or MCC) series units.
2. All fan coil units within the Tenant's space must have a secondary drain pan installed underneath each unit. Fan Coil hanging and piping must be done according to tenant criteria. Refer to mechanical sketches.
3. All fan coil units must have a strainer and circuit setter installed at each unit with a pressure / temperature plug installed on the inlet and outlet of the system, as well as across the strainer. The strainer must have a ball type isolation valve installed at the drain port for service.
4. All fan coil units must have an automatic air vent installed with the discharge piped to the condensate drain. A ball type isolation valve must be installed between the air vent and chilled water line. Air vents must be installed at the highest point of the supply waterline.
5. The maximum cooling coil face velocity should be 350 feet per minute for a blow thru application and 300 feet per minute for a draw thru application.
6. The coils should be 8 rows deep.
7. The coils should have 12 fins per inch.
8. A 480 volt, 60 hertz, 3 phase, 1750 rpm fan motor.
9. Insulated casing with drain pan.
10. The AHU must be mounted on spring isolators sized for minimum one percent (1-%) deflection. AHU must be as manufactured by Trane, York or Carrier.
11. Ceiling area may not be used as plenum return.
12. The Tenant's engineer is responsible for locating the existing ventilation air taps. If the existing taps are to be abandoned, they must be capped and sealed. During construction, all ventilation air taps must be capped.



MECHANICAL CRITERIA (cont'd.)

No conditioned water will be supplied to the space until the fan coil unit(s) is installed and under EMS control.

13. Once installed, access to the AHU unit(s) is vital. Engineers must note appropriate access doors or lift panels at every AHU unit location. There may not be any obstructions to the AHU unit or the unit will not be maintained. Tenant must submit as-built drawings prior to construction closeout showing the exact location of all equipment and ductwork.
14. The City of Danbury requires that all HVAC System Duct Smoke Detectors be connected to the existing FCI fire control panel located in the Mall Security Office.

Each Air Handling Unit (AHU) will have an addressable duct smoke detector(s) as required by NFPA 90A. Each duct smoke detector shall have a remote key operated reset/test device(s) mounted within the Tenant space and an addressable relay module(s) for each Tenant. The key operated reset device(s) and the relay module(s) shall be located in the Tenant storage area, preferably near the electrical service panels, at a 5'-0"± height above the floor.

The acceptable devices for this application are:

- FCI ADD Series Duct Smoke Detector
- FCI-RTS-451 Key Remote Test Station with all test stations keyed alike
- FCI AOM-2R Output Relay Module

All Fire Alarm work described above will be supplied, installed and programmed by the Landlord's designaged contractor. Landlord will conduct annual testing per NFPA 70. All maintenance and repairs for individual Tenant spaces are the responsibility of the Tenant.

Air Balance

An air balance report must be performed by an AABC certified air balance contractor at the Tenant's expense. All fan coil units used to condition the space, must have the gpm and all associated temperatures and

pressures recorded. The test & balance company must contact landlord representative, to insure the units are in full cooling at the time of the test. A copy of the report must be submitted to the landlord upon completion.

NOTE: Outside air may not exceed .1 cfm per sq. ft.

Energy Management System

Tenant must connect to the Mall's existing Energy Management System. The Tenant's contractor will coordinate with the Landlord's required controls contractor to remove all DDC components and disconnect all network cabling before demolition. Tenant shall be held responsible to maintain the integrity of the EMS network cable within their space during all phases of construction. General contractor shall bear sole responsibility for any damage or disruption to the EMS network.

FCU controls will be upgraded to meet the enclosed specifications during the following conditions:

- a) All tenant fit-outs
- b) All tenant renovations
- c) New VAV installations
- d) Existing controller failure

Criteria for Energy Management System:

1. Controls shall be supplied and installed by the Mall's Authorized Digital Controls Vendor Day Automation
2. Mounting and wiring of all control devices
 - FCU Controller
 - Space Sensor
 - Transformer
 - Air Temperature sensors
 - Pressure sensor and tubing
 - Communication wire (See wire specification)
 - Contractor shall run a communication wire (See wiring specification for detailed parameters)
3. All low volt control wiring for Control Package



MECHANICAL CRITERIA (cont'd.)

4. Integration into system including Space Temperature
 - Supply Air Temperature
 - Chilled Water Valve Position (Modulated)
 - Electric Heat (Stage 1 and 2)
 - Space Temperature Setpoint
 - Occupancy Command
 - Outside Air Damper Position (Modulated)
 - Fan Command (Start/Stop)
 - Fan Status
 - Return Air Temperature
 - Smoke Detector (Status Only)
5. Start-up, programming, and commissioning controls
 - Damper operation
 - Reheat operation (if applicable)
 - Value Position Modulation
 - Sensor accuracy
 - Contractor shall inspect pressure pick-up and replace as necessary
 - All work shall be warranted for one year after Macerich acceptance

Closeout Requirements

1. Tenant must submit as-built drawings and certified air balance reports prior to construction close out showing the exact location of all equipment and duct work.
2. Tenant is required to properly abandon old and unused roof top equipment (HVAC units, exhaust fans, etc.) by full removal, including curb with an appropriate metal deck and roof material patch. All roofing work must be performed by the Mall approved roofing contractor.
3. Pavers must be placed around the roof top equipment and from the main pathway to the equipment in order to protect the roof from traffic.

Existing HVAC Unit Refurbishment Scope of Work

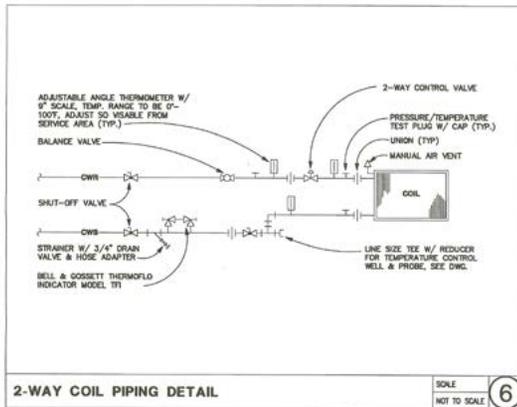
Tenants choosing to reuse an existing HVAC unit under 10 years of age must perform the following steps:

1. Complete cleaning of coil fins to ensure proper air flow.
2. Disconnect & flush chilled water coil.
3. Replace all belts, pulleys, shafts & bearings.
4. Completely clean & balance squirrel cage.
5. Replace all electrical components associated with the unit including, but not limited to contactors, starters, switches and circuit breakers.
6. Replace electric duct heater.
7. Clean all supply & return ductwork.
8. Clean drain pans and flush out condensate lines.
9. Check operation of fresh air damper (new actuator supplied with EMS package).
10. Air balancing required with written report to Landlord.
11. Complete upgrade to Energy Management System (required contractor).
12. Connection of required duct smoke detector to Mall fire alarm panel (required contractor).
13. A written report with evidence of the completed refurbishment must be provided to the Landlord prior to store opening.

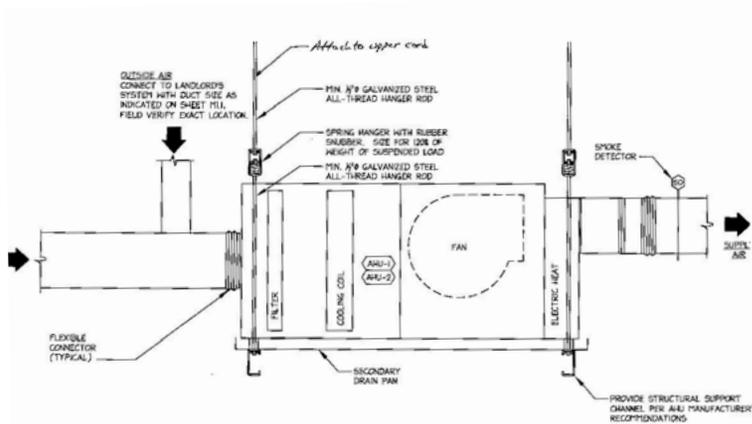
MECHANICAL CRITERIA (Cont'd.) Typical Details

The following are the approved details for Chilled Water Piping, AHU Hanging Detail, the Air Handler Secondary Drain Pan and Upblast Stack.

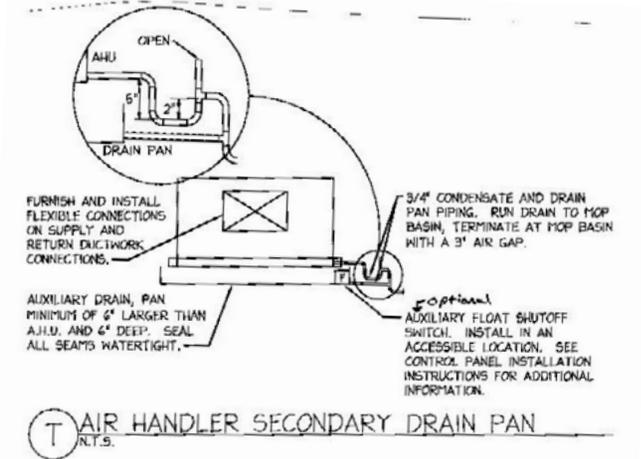
These details must be included in the Tenant's plans.



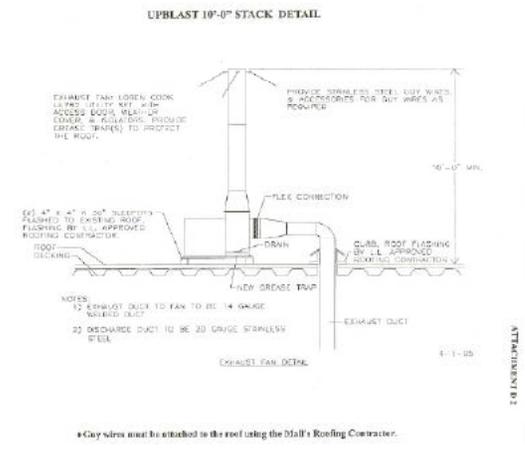
Chilled Water Piping Diagram



AHU Hanging Detail



Air Handler Secondary Drain Pan



Upblast Stack Detail

SPRINKLER CRITERIA

Tenants are responsible for modifications to the existing grid system within premises, with work being performed by the Mall sprinkler contractor only. Pursuant to the City of Danbury, there will be no work performed on the sprinkler system between the period of Thanksgiving and New Year's Day. The Tenant must submit complete drawings to the sprinkler contractor and coordinate payment and scheduling directly. Drawings must be designed based on the following guidelines and the Travelers Interpretive Guide To NFPA 13-2002 "Standard For The Installation of Sprinkler Systems" (see Attachments included herein):

The existing sprinkler system, which utilizes Victaulic Fit type fittings, is acceptable with Danbury Mall, LLC. The designated Sprinkler Contractor (hereafter referred to as SC) has been instructed to use Victaulic Fit type fittings.

The approved sprinkler contractor is the only individual who may physically touch the sprinkler piping within the Tenant spaces. During construction, the Tenant's contractors are completely liable for all damage, which occurs as a result of human error from misuse of sprinkler piping. A supervisor of the General Contractor (hereafter referred to as GC) must be on-site at all times during construction to enforce compliance with Mall regulations.

A policy has been implemented in Danbury Fair Mall in order to perform work on the sprinkler system that requires additional time for the GC and sprinkler contractor. In order to notify the Tenant and their GC in advance, the policy is outlined below:

Pre-Construction

1. The Tenant will instruct the GC and the SC that the following procedures will be applied to the sprinkler system throughout the construction process.
2. The GC will remove the ceiling only so that the sprinkler system can be inspected. On a lay-in type ceiling, the ceiling tiles without sprinkler head penetrations will be removed. The tiles with sprinkler heads penetrating the tile and the "T" bars shall remain in place.

3. Where a space is being renovated for the second, third, etc. time, all the previous identification marks will be removed by black spray paint prior to proceeding with step #1.

Inspection #1

Immediately after removal of the ceiling tiles, the GC will schedule Inspection #1.

Procedure:

1. A representative from the SC will inspect each fitting to assure that each locking lug is in the "LOCKED" position in the presence of the Landlord's representative.
2. As verification, the SC and GC will spray paint a small mark that is visible from the floor on each fitting as follows:
Sprinkler Contractor – Yellow
General Contractor – White
3. Additionally, it will be verified that there are no fittings in the demising partition(s). This verification will require removal of a piece of drywall from the construction space where any sprinkler main or branch line penetrates the demising partition. The wall and any penetrating pipe will be identified with yellow and white paint as above.
4. If a sprinkler branch feeds or is fed by a sprinkler head in an adjacent Tenant space, the above inspection procedures must be performed in the affected spaces. Inspections in adjacent affected spaces must occur at the beginning of the project as well as at the completion of the project.
5. The GC and SC will use the attached form (See "Attachments" included herein for details) to verify that the above procedure has been followed.

Construction Phase

1. If the sprinkler system is to be removed for architectural design considerations, the new system must be threaded black steel schedule 30 or 40. The following instructions will not apply.

SPRINKLER CRITERIA (cont'd)

2. During the renovation of the sprinkler system, the following procedures will be followed:
 - a. The sprinkler contractor will slowly drain the system by partially opening the 2" drain valve, while simultaneously opening an air inlet valve at the end and high point of the system.
 - b. After each (24-hour period) day's work and/or prior to refilling the system, the SC will inspect each fitting to assure that each locking lug is in the "CLOSED" position. The SC will spray a blue mark on the pipe adjacent to the fitting.
 - c. The SC shall refill the system (slowly reversing the drain down process) under supervision of the GC.
 - d. The above process will be followed for each drain down and fill sequence.
3. All new pipes shall be schedule 30 or 40 black steel with the ends prepared and marked per the manufacturer's recommendations using the manufacturer's procedures.
7. Only the Lieutenant of the Shift Supervisor may authorize modification of the Fire Protection System. All requests must be made in person by the contractor, and the proper form completed.
8. Individual zones may be shut down for emergency repair for up to four (4) hours without the Fire Watch present; however, this must be approved by a member of the Management Team prior to shut down.

Municipality Requirements

PLEASE NOTE: Routine sprinkler work may only be done between the hours of 7:30 a.m. and 4:30 p.m. A **mandatory** City of Danbury, 2 person Fire Watch is required for all routine work in the Mall. The Fire Watch must be present before any alarms will be disabled, or access is given to enter the sprinkler rooms.

A \$300 standard drain down fee applies. **There is a separate fee for the Fire Watch.** This is the responsibility of the General Contractor. Please contact the Mall Operations Manager for scheduling and payments 48 hours in advance.

Final Inspection

1. Upon completion of the sprinkler construction and prior to the installation of finished ceiling materials, the SC and the GC will inspect each fitting and apply a final green spray paint mark on the pipe adjacent to the fitting.
2. The GC and SC will use the attached form to confirm that the above procedure has been followed.
3. Danbury Fair Mall Personnel will not drain or fill the zone to space(s) being worked in. The sprinkler contractor will complete this procedure once the items listed below are followed and complied with. Access to the sprinkler room will be granted thereafter, or access could be denied.
4. Contractor log signed in/out in the security office.
5. Lock out/tag form filled out by both contractor and Mall personnel.
6. Operations Supervisor is notified before work is performed.

PLUMBING CRITERIA

General Design/Construction Coordination

The following criteria is provided for the purpose of designing the Tenant's plumbing system. This criteria is provided for Tenant's Engineer. It is the Tenant's responsibility to verify existing conditions and comply with all applicable codes and standards.

Complete Engineered drawings must be submitted to Landlord's Tenant Coordinator for review and approval. Landlord will review the plans for conformance to basic Mall requirements. The Landlord does not review for plumbing design, nor does the Landlord accept responsibility for the Tenant's adherence to governing codes.

The documents to be submitted for Landlord approval must include the following:

Complete plans and specifications covering the complete plumbing system. Documents must be signed and sealed by a Licensed Engineer in the state where the Shopping Center is located.

The Tenant shall provide a complete plumbing system for the Tenant space. The Landlord has provided connections in each Tenant space for sanitary waste and potable cold water.

Tenant is responsible for all plumbing including toilets, sinks, urinals, drains, hot water heaters, water coolers and connections into existing water and sewer lines.

Water Efficiency

1. The Tenant is required to install waterless urinals in tenant restrooms when urinals are used.
2. Low-Flow water closets using 1.6 GPF or less gallons per flush will be installed in all tenant spaces.
3. Operation sensors and low-flow heads using 0.5 GPM or less in lavatories.

Tenant shall provide a main water shut off valve located at eye level in a wall behind a labelled access door. Locate in or near employee restroom as designated by Landlord.

All domestic supply lines shall be copper. Sanitary and vent lines traversing the ceiling area to be cast iron or copper (no PVC). Tenant will utilize electric water heaters for domestic hot water.

Every Tenant must install a handicapped restroom facility with a minimum of one water closet and one lavatory and in accordance with local code officials. An exception to this requirement is only permitted for Food Court Tenants who are within close proximity to the public restrooms upon approval of the Landlord and local code official.

A water meter to measure the amount of water used must be installed by the Tenant below the lavatory. If applicable, second level restrooms must install a floor drain. Main shut off to be located adjacent to the water meter below the lavatory.

Mop sinks and water fountains must be installed per local code requirements.

Tenant must install clean outs as required by code and Landlord's requirements and these shall terminate flush with the finish floor or wall. No clean outs are permitted above the ceiling.

Garbage disposals are not allowed.

Hair salons and pet shops shall provide hair and solids interceptors on all sinks and basins which may receive human or animal hair. After installation, these hair interceptors shall be properly maintained so as to keep the sanitary system free from any adverse conditions.

Except with Landlord's prior written permission for non-compliance, all pot sinks, scullery sinks, pre-wash sinks and other kitchen units must be connected to a grease trap. Dishwashers may not be connected to grease trap.



PLUMBING CRITERIA (cont'd.)

Waterproofing must be installed in all “wet areas” such as kitchens, restrooms, mop sinks, drinking fountains, etc. The waterproof membrane must extend 4” vertically on all demising walls. This membrane will be water tested by the General Contractor and inspected and signed off by Mall Personnel. If the membrane fails the water test, it must be replaced.

If an existing membrane is being reused, it must be water tested and signed off by Mall personnel. If it fails the water test, it must be replaced. All floors in a restaurant or food court area must also receive a waterproof membrane prior to installing finished floor. Tenants must install all floor coverings.

Food service, hair salons or other Tenants with equipment or operations that have the possibility of backflow will be required to install an approved backflow preventer. These must be certified and acceptable to the water district and checked yearly or as required by the local authority having jurisdiction. Tenants on the upper level must coordinate with lower level Tenants and the Landlord for floor penetrations and any plumbing under the upper level floor/deck. Tenant will be responsible for all cost associated with this work.

All floor penetrations for upper level Tenants, including but not limited to, penetrations for sanitary, water, or electrical will be caulked and sealed to provide a watertight condition, which will prevent any damage to Tenants below.

Tenants must submit calculations to the Landlord which show the size selection or basis of capacity of all equipment and piping.

On completion of project, all sanitary lines must be jetted and written documentation must be submitted to Mall management.

Gas Service

Gas may be available at the Center. Tenant, at its sole cost and expense and in compliance with local code must procure gas service to and within the demised premises and will make all necessary arrangements with the local Gas Company for such service. Tenant is responsible for installation of a gas meter at the gas meter header.

Pressure regulators and piping required for connection to Tenant's equipment is the responsibility of the Tenant. Coordinate with Landlord for regulator vent routing.

Gas piping on the roof must be placed on pillow blocks or similar arrangement.

Ventilation

Tenants will provide vertical exhaust ducts at a location designated by Landlord. All hood exhaust must be connected to vertical duct in accordance with code. Tenants are required to provide for the upkeep and maintenance for such vertical exhaust duct and related devices and materials.

All sanitary sewer and plumbing vent piping shall comply with all local codes.

STRUCTURAL CRITERIA

The following criteria is provided for the purpose of designing the Tenant's structural drawings. This criteria is provided as a guideline for Tenant's Engineer. It is the Tenant's responsibility to verify existing conditions and comply with all applicable codes and standards.

Complete Engineered drawings must be submitted to the Landlord's Tenant Coordinator for review and approval. Landlord will review the plans for conformance to basic Mall requirements. The Landlord does not review for design, nor does the Landlord accept responsibility for the Tenant's adherence to governing codes.

The documents to be submitted for Landlord approval must include the following:

- Complete plans and specifications for all structural work. Documents must be signed and sealed by a Licensed Engineer in the state where the Shopping Center is located.

General Requirements

1. The Tenant's storefront must be structurally self-supported. Tenant may not support the storefront from the bulkhead or fascia. Structural support for Tenant storefronts must be from the roof joists for lateral bracing.
2. Fixtures and equipment may not be attached to or supported from the floor or roof deck.
3. Structural drawings are required for all items that require support from the steel structure or for all roof top equipment weighing 300 lbs. or more.
4. Joist reinforcing is required for roof top equipment as well as steel support for all roof openings.
5. Upper level Tenant's must review base building structural drawings prior to installing a security safe, ovens or any equipment weighing 300 lbs. or more.

EXIT CORRIDORS

Distribution of utilities through a newly constructed or an altered exit passageway is prohibited except for equipment and ductwork specifically serving the exit passageway, sprinkler piping, standpipes, electrical raceway for fire department communication and electrical raceway serving the exit passageway.